Key Messages and Recommendations - Previous Recommendations

Year first made	Action	Recommendation	Progress
2013	**National Blood Transfusion Committees, working with Regional and Hospital Transfusion Committees in association with NHS England patient safety domain and equivalent organisations in the devolved countries and the National Comparative Audit Programme**	**Process redesign**: Annual SHOT data consistently demonstrate errors to be the largest cause of adverse transfusion incidents. In line with human factors and ergonomics research it may be better to redesign the transfusion process by process mapping and audit at local and national level, to design out the medical errors	We have held discussions with the National Clinical Audit (England) team and with the England National Blood Transfusion Committee chair. Audit of the transfusion process in a small number of large hospitals is planned as a pilot, to see why and how people make workarounds and take short cuts.
2013	**NHS England, patient safety domain**	**All ABO incompatible red cell transfusions to be included as 'never events'**: ABO incompatible transfusions may be fatal and are absolutely preventable. The two thirds that do not result in harm should be included as reportable 'never events'	NHS England, patient safety domain has published a revised 'Never Events' list (March 27th 2015). This includes 'transfusion of ABO-incompatible blood components or organs' but 'excludes where ABO-incompatible blood components are deliberately transfused with appropriate management' and 'excluded are scenarios in which clinically appropriate ABO-incompatible solid organs are transplanted deliberately'. http://www.england.nhs.uk/wp-content/uploads/2015/03/never-evnts-list-15-16.pdf

2013	**Care Quality Commission**	Management of blood and blood component transfusion to be included as a specific standard by the Care Quality Commission. This should include the same subset of standards as currently apply to medicines (Outcome 9)	Discussions are in progress with the Care Quality Commission. Discussions have taken place between CQC and SHOT as to how SHOT data could be used by CQC to help understand transfusion practices. Reported benchmarking data will be shared with CQC to examine how this information can support inspections. CQC fully understand that rates of reporting vary considerably and for different reasons but guidance will be provided by SHOT to ensure these data are interpreted correctly and used appropriately during inspection to discover how Trusts manage risks and learn from errors. These questions are already in place for other areas.
2013	**Trust/Health Board Chief Executive Officers and Medical Directors responsible for all clinical staff**	**Don't give two without review**: Transfusion-associated circulatory overload is a significant hazard particularly when elderly or other patients at risk (renal impairment, cardiac disease, obstetric haemorrhage, gastro-intestinal haemorrhage) receive several units of blood without review and a check on the Hb level This advice is inspired by a campaign devised by NHSBT's Patient Blood Management team	Preliminary audit of hospitals shows that this is considered an important recommendation to action, but is difficult.
2013	**Trust/Health Board Chief Executive Officers and Medical Directors responsible for all clinical staff**	**Advice for patients**: Day case or outpatient transfusions: with the increased emphasis on day case and community care, patients receiving transfusions need to be given printed advice, be advised to report any symptoms or complications and provided with a 24-hour contact number	This advice has been previously recommended in British Committee for Standards in Haematology (BCSH) guideline on the administration of blood components (BCSH Harris et al. 2009).

2012	**Hospital, Trust and Health Board Chief Executive Officers, Risk Managers, Pathology Laboratory Managers and all staff involved in blood transfusion**	**Patient identification**: Correct and positive patient identification at every step remains absolutely essential, and is the responsibility of every member of staff. Hospitals/Trust Boards should review their identification procedures to ensure that patients are safely identified throughout their hospital journey. All UK patient safety programmes should take the identification agenda forward as part of patient-centred care	
2012	**Hospital Transfusion Team (HTT) Hospital Trust and Health Board Pathology Managers, supported by Chief Executive Officers**	**A zero-tolerance policy is recommended for the identification of all pathology specimens.** In other words, samples should not be accepted by the laboratory for analysis without the standard 4 identifiers used for transfusion samples, first name, surname, date of birth and an identity number, ideally the National Health Service (NHS) number. All pathology samples should be taken only after confirmation of identity, and be labelled at the patient's side	
2012	**All clinical and laboratory staff in Hospitals, Trusts and Health Boards, General Practice and Community Hospitals**	**Communication and handover**: Hospital and primary care staff should work at building relationships to improve communication and handover. Communication failures within hospitals, between hospitals and between hospital and primary care are all responsible for adverse incidents. Good communication is required between laboratories and clinical staff and vice versa to ensure specific requirements are met, and correct results communicated to clinical areas	
2011	**Trust/hospital/Health Board Chief Executive Officers (CEOs);** **for formal consideration by the General Medical Council (GMC); Nursing and Midwifery Council (NMC)**	Correct patient identification should be a core clinical skill. Errors of identification impact on every area of medicine. This should be given formal consideration by the GMC and NMC	SHOT staff met with Vicky Osgood from the GMC who made several useful suggestions and contacts. These will be followed up.

2011	**Hospital Transfusion Team (HTT)**	The use of a transfusion checklist across the complete transfusion process is recommended to ensure correct completion of each step. A model template can be found on the SHOT website at www.shotuk.org/resources/current-resources	
2011	**UK Transfusion Laboratory Collaborative (UKTLC), UK National External Quality Assessment Service for Blood Transfusion Laboratory Practice (UK NEQAS BTLP), Education subgroup of the National Blood Transfusion Committee (NBTC)**	Education and competency in blood transfusion safety remains a key issue in patient safety. Competency assessment must be underpinned by an adequate and assessable knowledge base for both laboratory and clinical staff at every level	The UKTLC have undertaken two laboratory surveys in 2011 and 2013 and a report is in preparation, together with updated laboratory standards.
2011	**For formal consideration by the General Medical Council (GMC) and Nursing & Midwifery Council (NMC)**	Knowledge of transfusion medicine and prescribing of blood components is an essential core requirement for any practitioner (medical and nursing) who prescribes or authorises blood components	The education subgroup of the NBTC is making recommendations for changes to several curricula based on their review of all undergraduate, foundation year and specialist curricula.
2011	**Trust/hospital/Health Board Chief Executive Officers (CEOs), General** **Practitioners (GPs)**	Clinical and transfusion laboratory handover templates should be improved to include information about diagnosis (particularly haemoglobinopathies), irregular antibodies and special requirements. Patients are vulnerable with the increase in shared care between hospitals, within a hospital particularly between shifts, and between hospital and community. (A handover tool kit for acute care is available at http://www.rcplondon.ac.uk/resources/acute-care-toolkit-1-handover)	

2010	**NBTC, Trust/hospital chief executive officers (CEOs)**	There should be a review of the practical aspects of the implementation of NPSA SPN 14 and other national transfusion competency initiatives with a view to new guidance being issued and that Trusts should ensure that individual transfusion practitioners are fully supported with the allocation of additional link nurses in the escalation of training and assessment.	Education in transfusion practice and the practical aspects of SPN14 have been reviewed by subgroups of the National Blood Transfusion Committee (NBTC), further work is underway, and competency is further discussed in Chapter 4 of the 2011 Annual SHOT Report.
2010	**BCSH, Transfusion Taskforce**	The existing British Committee for Standards in Haematology (BCSH) guidelines for the Administration of Blood Components should be supplemented by an amendment dealing with measures to avoid the development of TACO and over-transfusion, particularly in vulnerable patients, including pre-transfusion clinical assessment, rate of transfusion, fluid balance, regular monitoring of Hb and prescription of diuretics.	An amendment to the BCSH guidelines on blood administration[14] on measures to avoid TACO has been published.
2010	**NHSBT**	There should be a systematic review of the application of weight-related empirical formulae or algorithms in prescribing for low body weight adults	
2010	**Education Working Groups of national transfusion committees**	Transfusion medicine must be part of the core curriculum for doctors in training.	See above; this work is progressing well.
2010	**Trusts/hospitals**	To avoid inappropriate and unnecessary transfusions due to lack of adequate clinical handover, decisions made concerning the need for transfusion support should be documented in the clinical handover templates.	Following a meeting with the President of the Royal College of Physicians and colleagues SHOT will prepare the key messages for dissemination in various formats (e.g. 'top tips', a 'concise guideline'). In addition, a teaching slide set will be prepared that can be downloaded from the SHOT website.
2010	**Hospital transfusion teams (HTT)s**	All under- and delayed transfusions that have a significant impact on patient outcomes should be reported to SHOT.	An increase in reporting of delayed or under-transfusion has occurred in 2011 in keeping with the 2010 recommendations. The importance of this is demonstrated by the death of one patient caused by under-transfusion reported in Chapter 9 of the 2011

			Annual SHOT Report.
2010	**SHOT team**	The Dendrite database should be enhanced to fully capture the salient clinical features and details of the timeliness of blood component support.	The SHOT Database has been enhanced in order to caputre reports of delayed transfusions.
2010	**Trusts/hospitals**	Trusts should implement the recommendations of the UK Transfusion Laboratory Collaborative	The UK Transfusion Laboratory Collaborative (UKTLC) met in January 2012 and discussed the concerns about competency particularly as the number of laboratory errors has increased in 2011 (see Chapter 7). The UKTLC plan to address this in association with UK National External Quality Assessment Service for Blood Transfusion Laboratory Practice (UK NEQAS BTLP). Case-based scenarios will be developed and recommendations will be made to encourage the wider use of root cause analysis when incidents and near miss events occur. The UKTLC also plan to assess the applicability of their published recommendations[23] to the developing 'hub and spoke' models for transfusion. Concerns about the reliability of point of care testing for Hb assessments have begun to be addressed by a pilot study undertaken by UK NEQAS (General Haematology). A preliminary study of blood gas analysers and HemoCue machines has demonstrated a wide variation in results obtained and therefore a need for wider training and QC assessments (B. De la Salle, Scheme Manager UKNEQAS General Haematology, personal communication).
2010	**Manufacturers of laboratory IT systems**	Work should continue with suppliers of LIMS to improve the capability of IT systems to generate warning flags and implement component selection algorithms based on data incorporated in the component label. These improvements should be in line with the recommendations of the BCSH guidelines on laboratory IT systems currently in preparation.	
2009	**CMOs' Blood Transfusion Committees in England,**	Hospital transfusion laboratories need to liaise closely with manufacturers to develop and implement standard, detailed	The IT subgroup of the NBTC is currently surveying hospitals' use and/or plans for implementation of IT

	Wales, Scotland and Northern Ireland working with stakeholders, blood transfusion services, clinical and laboratory specialists and manufacturers	specifications for electronic systems in the laboratory, at the bedside and at the clinical-laboratory interface. An education package including minimum knowledge and skills, the appropriate use of these systems, and appreciation of their limitations should be a part of this joint project.	including transfusion laboratory systems, barcoded wristbands, wireless bedside IT, electronic blood fridges and electronic laboratory requesting. It will also seek to standardise requirements for blood transfusion in preparation for the implementation of the Clinical Records Service and take opportunities to link with other national patient safety initiatives using similar bedside technology
2009	**SHOT and its reporters, UK blood services and their R&D directorates**	All pulmonary complications of transfusion should be recorded and reported to haemovigilance systems even if they do not fully fit existing criteria. Research should be initiated to evaluate the current inclusion and exclusion criteria, especially for TRALI and TACO. A register of possibly implicated donors should be kept by the blood services.	A pulmonary complications subgroup convened by SHOT has considered various approaches and the following have been proposed: 1. Firstly validation of the current approach of categorising cases of TRALI; 2. Constitution of a second expert panel to review potential TAD and TACO cases on a regular basis since their distinction from ATR and/or TRALI can be difficult; 3. It has been accepted that a Dendrite enhancement will be required to capture adequate information on all pulmonary cases to facilitate their correct classification, and that changes to this aspect of the database should be trialled during 2011.
2009	**NBTC, DH, Trust / Hospital CEOs**	A patient education campaign should empower recipients of blood transfusion, and all patients undergoing tests, procedures and surgery, or receiving drugs and therapies, to ask the staff before they carry out the intervention; ***'Do you know who I am?'***	A national patient education campaign was released in 2012. In addition, the Department of Health in its current list of "never events" has included "Death or severe harm as a result of administration of the wrong treatment following misidentification due to a failure to use standard wristband (or identity band) identification processes"
2009	**DH, trust CEOs**	Trusts must implement the use of a documented handover tool, such as the one recently developed by the Royal Colleges, as part of a formal patient handover system.	It is well recognised that clinical handover carries risks arising from poor communication and systematic error. The Royal College of Physicians (RCP) conducted a survey of fellows and members in 2010, which was followed by a workshop dedicated to handover. From this work, a simple and pragmatic toolkit has been devised, which following consultation will be made available on the website. This toolkit will contain

			standards for the structure and content of a handover document developed by the RCP in 2008. The standards are evidence and consensus based and templates and related implementation tools (e-learning tools, audit tools) are available at (http://www.rcplondon.ac.uk/resources/clinical/medical-record-keeping).
2008	**HTTs**	**Awareness of criteria for reporting adverse events & reactions.** Reporting organisations should ensure that all members of the hospital transfusion team and the broader staff involved in the transfusion process are fully aware of the criteria for reporting adverse events and reactions to SHOT (and MHRA) including the reporting of cell salvage and Near Miss events. Details of what to report and how to report it are readily available on the SHOT and MHRA/SABRE websites as well as in the annual SHOT Report & Summary.	SHOT has been active in producing and publicising reporting criteria via the website, newsletters, the Annual Report, and local, regional and national meetings. In 2009 there was again a marked increase in reporting to SHOT, and more importantly a reduction in the number of reporting organisations sending very few reports or reports in only a few categories. SHOT will continue its programme of activities in 2010, and in particular the SHOT Transfusion Liaison Practitioner will be working closely with HTTs through the hospital liaison network in the English regions. It is anticipated that the new Dendrite-based system will facilitate even greater participation in SHOT reporting now and in the future.
2008	**NBTC, and equivalents in Scotland, Wales & Northern Ireland. Developers of software for laboratory IT systems**	**A national specification for transfusion laboratory IT systems.** A national specification for transfusion laboratory IT systems should be developed with minimum standards, which should be met by all hospital transfusion laboratories participating in any way in pre-transfusion testing or issuing of blood components for transfusion. The national transfusion committees should lead this initiative in collaboration with the UK Transfusion Laboratory Collaborative, BCSH and BBTS. Liaison with software developers is essential to enable safety initiative to be effectively incorporated into existing systems.	The IT subgroup of the National Blood Transfusion Committee has been reconvened in 2010 and will be developing a minimum IT specification for hospital laboratories, working with key stakeholders at NHSBT, NPSA and the Transfusion Managers Working Group. It will also prepare the way for working relationships with manufacturers of laboratory computer systems.
2008	**NPSA**	**Competency assessment and standardised, transferable competency certification of all staff involved in transfusion.** Hospitals and Trusts are in the process of rolling out competency	The NPSA has produced further clarification and guidance about the implementation of SPN 14 (November 2006) sent in the form of a letter to Nursing

		assessments for all staff involved in the transfusion process as a result of the NPSA recommendation (SPN 14) and the MHRA requirements for laboratory competencies. Comprehensive competency frameworks have been developed by NPSA which are used within trusts as a basis for local training and competency assessments. However a standard, nationally transferable, checklist of minimum requirements for certification for staff involved in transfusion needs to be developed, agreed and disseminated. The NPSA should initiate this project in collaboration with relevant stakeholders.	Directors and Medical Directors.[13] In addition there have been further enhancements of the toolkit available on the website
2007	**NBTC, GMC, PMETB, Royal Colleges, Deaneries**	Transfusion Medicine must be part of the core curriculum for doctors in training.	The Royal Colleges and the Specialist Societies sub-group of the NBTC is addressing this.
2007	**NBTC, UKTLC, BBTS, IBMS, Trust/hospital CEOs**	Professional, accredited staff must take responsibility for transfusion safety in the laboratory and in clinical practice.	The UKTLC has published minimum standards for hospital transfusion laboratories.[10,11]
2007	**NBTC, BCSH, RCM, RCOG, RCGP, HTTs and HTCs**	Obstetricians and midwives must be familiar with the anti-D prophylaxis programme and its rationale.	Educational days have taken place and been well attended. There appears to be a knowledge gap and educational programmes must continue to address this.
2007	**DH, MHRA, SHOT, CEOs, HTCs, BTS**	Participation in haemovigilance must be improved as it is mandatory in the UK and the rest of Europe.	Reporting to SHOT increased by 85% between 2007 and 2008, and a further 23% in 2008–2009
2006	**Hospital CEOs, NTLC, BBT network, RCN, BBTS**	Speciality accredited laboratory and clinical staff in all hospitals.	The UKTLC has delivered recommendations to the DH.
2006	**Trust/hospital CEOs, SHOT, consultants with responsibility for transfusion, HTT, HTC**	Comprehensive reporting to SHOT by all hospitals.	SHOT reporting has definitely increased in 2008 and 2009, with increased reports, more participating organisations and more reports sent per organisation.
2005	**Consultant haematologists with responsibility for transfusion, HTTs, HTCs**	Appropriate use of blood components.	Overall reduction in red cell usage > 15% in last 5 years nationwide. National Comparitive Audit (NCA) platelet audit showed widespread inappropriate use of platelets and non-adherence to guidelines (www.nhsbtaudits.co.uk).

2004	**RTCs and user groups**	The RTC structure provides a potential forum for debate and sharing of problems and solutions in a supportive environment with expert clinical input. SHOT reportable incidents should be a standing agenda item for regional BMS forums and TP meetings. The RTCs should support translation of guidelines into local practice.	NBS Hospital Liaison Teams focused support on RTCs in 2005. RTCs set up working groups in 2006. Realignment of RTCs with SHA regions in 2007.
2002	**Trust CEOs**	HTTs must be established and supported.	Survey in 2004 (Murphy & Howell) showed 70% of Trusts had HTT but only 30% were supported. A further survey in 2006 (Murphy & Howell) stated that 97% of Trusts had an HTC and 96% a TP.
2002	**Medical Royal Colleges, Universities**	Blood transfusion should be in the curriculum of specialist trainees, especially anaesthetists and critical care nurses.	The Royal Colleges and the Specialist Societies subgroup of the NBTC was established in 2007.
2002	**GMC, PMETB, Undergraduate Deans, NMC**	Blood transfusion must be in the curriculum for student nurses, medical undergraduates and newly qualified doctors.	An education subgroup of the NBTC has been established in 2007. SNBTS training package www.learnbloodtransfusion.org.uk endorsed in Scotland, Wales and NI.